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H- ion sources at CSNS

Thursday, October 23, 2025 8:30 AM (30 minutes)

An RF-driven H^- ion source has been developed and put into commissioning at the China Spallation Neutron Source (CSNS). The ion source features a silicon-nitride plasma chamber and an external antenna structure. It has demonstrated a maintenance interval exceeding 7,500 hours with nearly 100% availability.To achieve the goal of delivering a 500 kW beam power to the spallation target, as required by CSNS-II, the beam current from the ion source must be increased while minimizing the beam emittance. Research on beam intensity, space charge compensation, and stripped proton beam elimination has been conducted on the test bench with a new LEBT.

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

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